# Oil and Gas News Briefs Compiled by Larry Persily October 7, 2019

### Mozambique says Exxon ready to give OK for LNG project

(Bloomberg; Oct. 5) - Mozambique's government said ExxonMobil will sign off this week on a final investment decision for a liquefied natural gas project that could cost as much as \$33 billion to build — the biggest energy development ever in Africa. A ceremony marking the decision will take place Oct. 8 in Maputo, the capital of the southeastern African nation, the Ministry of Mineral Resources and Energy said in a statement Oct. 5.

Exxon's project in the northern Cabo Delgado province will cost between \$27 billion and \$33 billion, according to a March report by Johannesburg-based Standard Bank Group. The liquefaction and export project, at 15.2 million tonnes annual capacity, is even bigger than the one that Total is building in Mozambique. That project, which Total has taken over from Anadarko, is planned for 12.88 million tonnes annual capacity in its first phase, costing more than \$20 billion. The Total-led venture is planning a 2024 start-up.

"We look forward to progressing the Rovuma LNG project and working with the government to maximize the long-term benefits this project will bring," a spokesman for Exxon said. The investment decision by Exxon and its partners could boost President Filipe Nyusi's chances in elections scheduled a week later. A promise to develop the country's gas industry is a big part of Nyusi's campaign. Exxon's partners include Italy's Eni, Korea Gas, China National Petroleum Corp., Portugal's Galp, and Mozambique's national oil company. The offshore field holds an estimated 85 trillion cubic feet of gas.

# U.S. is changing global LNG market, but other gas still cheaper

(Forbes contributor; Oct. 3) - The term "LNG market" might be considered oxymoronic, given the history of the industry that could be described as an oligopoly. Typically, a liquefaction project followed a defined path: find enough gas to fulfill a long-term deal; locate a buyer willing to commit for 15 or 20 years with restrictions preventing resale of LNG cargoes (destination restrictions) to reduce competition; take-or-pay clauses; and prices indexed to oil, based on the relative Btu content (which is like pricing tea based on the caffeine content relative to coffee). The spot market was extremely thin.

Enter U.S. exporters. They have shaken up the industry by offering gas with prices indexed to U.S. Henry Hub gas prices, rather than crude oil prices, and often eschewing destination restrictions, while pursuing small-scale, short-term sales when profitable. (Customers in 2018 include Jamaica and Malta, both too small to be on traditional LNG

exporters' radar.) This is an excellent example of animal spirits at work: aggressively seeking profitable business rather than avoiding competition that might reduce prices.

More consumption globally would help reduce greenhouse gases, to everyone's benefit. So, U.S. LNG suppliers are doing a service by being more competitive than others and reducing global prices, but there are limits. U.S. exporters are hindered by the cost of their feed gas, around \$3 per million Btu in recent years. Contrast that with gas entering Russian pipelines in Siberia, which is cheaper, and exporters like Qatar, whose gas is so rich in valuable liquids that the gas can be provided to the LNG plant for free.

# LNG not likely to see price jump in Asia this winter

(Reuters columnist; Oct. 2) - Liquefied natural gas won't enjoy its customary winter boost in Asia this year, and the seasonal price swings may well be a thing of the past as new supply and a steadier China demand profile dampen price volatility. The forward curve for LNG futures isn't quite as flat as a pancake, but it certainly suggests the winter price spike seen in seven of the past eight winters will be absent this year.

Chicago Mercantile Exchange contracts based on the Asian benchmark spot price, the Japan/Korea Marker compiled by S&P Global Platts, show a winter price peak of \$7.02 per million Btu for February cargoes, as of the close of trade Oct. 2. This compares to \$5.71 for the front-month November contract, \$6.45 for December, and \$6.98 for January. After the February peak implied by the futures, prices moderate again with the March contract at \$6.70, April at \$6.12 and May at \$5.99.

The modest uptick in expected prices for the winter stands in contrast to prior years, when Asian spot prices have surged during colder weather. For example, in the winter of 2017/18, the spot price more than doubled from \$5.40 in June 2017 to a peak of \$11.50 in January 2018. Since then, however, increased LNG supply from Australia and the U.S. has come online. And China is managing its gas supply and demand better, with more storage to smooth out seasonality, as well as increased gas domestic output.

# LNG demand growth dependent on price and 'opportunistic buyers'

(S&P Global Platts; Oct. 4) - The next wave of LNG demand growth expected from Asia's emerging economies is far from assured, raising questions over how fast supply from new projects can be absorbed by the market in the coming decade. The concerns emanate from the economic and energy profile of the emerging countries, which stretch from Pakistan to the Philippines, and for whom LNG imports remain one of the most expensive fuel sources looking to build up a permanent role in their energy mix.

This is vastly different from developed economies like Japan, South Korea, and Taiwan that have traditionally anchored LNG demand, accounting for over 60 percent of global imports. At stake are several billions of dollars invested in supply projects globally, for which investors may have to temper their expectations. Some proponents have argued that supply will create its own demand, but looming risks of a global recession mean that expensive LNG could be the first fuel countries drop from their energy mix.

"The capital for investment and development of LNG is significant, while the financial capabilities of Vietnamese enterprises are limited," Tran Tuan Anh, Vietnam's Minister of Industry and Trade, said last week at the LNG Producer-Consumer Conference in Tokyo. Tran cautioned that imported LNG is priced higher than domestic gas and coal, while electricity prices in Vietnam are low, severely limiting the competitiveness of LNG.

International Energy Agency Chair Fatih Birol said as many as 50 countries will import LNG by 2025, compared with eight in 2000, but many will be opportunistic buyers. "If prices go up very high ... the opportunistic buyers may look at different options and therefore the price levels are important to have healthy demand growth," Birol said.

### Russia uses LNG fuel for Northern Sea Route oil shipment to China

(OilPrice.com; Oct. 2) – The trading arm of Russia's second-largest oil producer, Lukoil, has sold an oil cargo to the trading unit of China National Petroleum Corp. (CNPC) in a rare Arctic transit, Reuters reported Oct. 2, citing shipping data from Refinitiv and two industry sources. Lukoil's trading unit Litasco sold the oil to CNPC trading arm Chinaoil. The tanker made the voyage via the Northern Sea Route from Murmansk to the port of Dongjiakou — a rare shipment to China via the Arctic instead of via the Suez Canal.

The route via the Arctic is half the distance than traveling from Murmansk to China via the Suez Canal, according to Refinitiv data cited by Reuters. The tanker, the Korolev Prospect, completed the voyage from Cape Zhelaniya to Cape Dezhnev in Russia's Arctic waters using liquefied natural gas as its fuel — the first time in the history of shipping that a large-capacity oil tanker has crossed the full length of the Northern Sea Route using only LNG, Russian shipping firm Sovcomflot said.

Russia has been continuously growing its oil exports to China, but in recent months Saudi Arabia has been China's top oil supplier as the Kingdom has been significantly boosting exports to the Asian market at the expense of slashing shipments to the most transparently reported market, the U.S. For a second month in a row, Saudi Arabia was China's biggest oil suppler in August, but the attacks on Saudi oil infrastructure last month could change that in the September data.

### Yamal LNG carriers move through Northern Sea Route in October

(The Barents Observer; Norway; Oct. 3) - At least six top ice-class Arc7 liquefied natural gas carriers were sailing through the eastern part of the Northern Sea Route during the last days of September and early October. It is the most complicated part of the Arctic shipping route. Normally, ice lies thick in the area until late July and the waters again start to freeze in early October.

Judging from information from Russia's Northern Sea Route Administration, two LNG carriers were on their way to or from ports in South Korea, while four were going to or coming from China. That constitutes almost half the current fleet of icebreaking carriers serving the Yamal LNG project. A total of 13 carriers have been built for the project and the remaining two newbuilds will start serving Russia's remote Arctic coast next year.

The shipments are part of a growing trade of Russian LNG to the Asian-Pacific region. According to Novatek, operator of the Yamal terminal, about 25 percent of its LNG in the third quarter of the year went to Asia. Ice maps show that the Northern Sea Route in the first days of October were completely ice-free and that the ice rim has retreated to north of the 80th parallel across practically the entire Russian Arctic. However, shipping is still not all easy. Drifting ice floes and icebergs can complicate navigation.

# Federal report says Texas LNG project will not jeopardize wildlife

(Houston Chronicle; Oct. 2) - The development of a gas pipeline and the Rio Grande LNG export terminal at the Port of Brownsville, Texas, will not jeopardize the existence of the endangered ocelot and jaguarundi, a report from the U.S. Fish & Wildlife Service said. In a biological opinion released Oct. 2, the federal agency sided with developer NextDecade. The company is seeking permission from the Federal Energy Regulatory Commission to build the 135-mile Rio Bravo Pipeline and an export terminal on the Brownsville Ship Channel to produce up to 27 million tonnes of LNG per year.

"There is no critical habitat for these species listed in the action area, therefore none will be affected," U.S. Fish & Wildlife Service Field Supervisor Charles Ardizzone wrote in the biological opinion. As part of its mitigation efforts, NextDecade has pledged to buy 1,050 acres of land next to wildlife refuges to be set aside as ocelot and jaguarundi habitat. The company has also pledged to reroute part of the pipeline and modify the lighting at its proposed plant to minimize further impacts to the endangered wildcats.

Rio Grande LNG and two other export terminals proposed at Brownsville face stiff opposition from a coalition of shrimpers, fishermen, environmentalists, neighbors, and communities working under the banner Save RGV From LNG. The projects are waiting on FERC permit decisions, while earlier environmental reviews expressed concern about the cumulative effects of traffic, noise and habitat fragmentation on endangered ocelot, jaguarundi, and aplomado falcon when combined with other projects in the area.

### **Environmental group will measure Permian methane emissions**

(Midland Reporter-Telegram; Texas; Oct. 3) - An environmental advocacy group has announced it will launch an effort in the Permian Basin to measure emissions of methane, a powerful greenhouse gas released during natural gas production and linked to global warming. The New York-based Environmental Defense Fund said Oct. 2 it would use monitoring technologies to determine how much methane is escaping from Permian Basin operations, one of the world's largest oil and gas producing regions.

Monitors will be installed on the ground and in the air over the year-long study, according to the group. The data will be available for public use. Field measurements are expected to begin in November and the first data release is scheduled for early next year. Nearly 5 million barrels of oil is produced each day in the Permian Basin which spans 86,000 square miles in West Texas and southeastern New Mexico, but most methane emissions are not measured, the environmental group said.

### Chevron, Exxon in race to reach 1 million barrels a day in the Permian

(Reuters; Oct. 3) - Chevron is turning to joint ventures and drilling alliances in its bid to dominate the Permian Basin after abandoning its takeover attempt of Occidental Petroleum that would have made it the leading producer in the world's biggest shale field. Chevron is now in a race with ExxonMobil to be the first to pump a million barrels of shale oil a day from the field in the West Texas and southeastern New Mexico, using a strategy that depends on partners sharing their expertise and their output.

Chevron's deals, ranging from large-scale joint ventures to small deals where it has leased land to other operators, give it a share of the oil its partners produce. They also provide data from thousands of wells stretching back years, allowing Chevron to hone drilling strategies. In return, partners get access to areas adjacent to their wells and pipelines, reducing costs. At a site near Midland, Texas, know-how gleaned from their partners is helping Chevron drill a series of ultra-deep wells — named after the mythical three-headed hound Cerberus — to reach a rich layer more than a mile underground.

Chevron missed the first phase of the shale boom early this decade but reversed course in 2014, drilling its first horizontal well in the Permian and embarking on an investment spree to try to become the world's largest shale oil producer. Exxon, meanwhile, spent \$6.6 billion two years ago to buy more Permian land and is now running nearly three times more rigs than Chevron in a race to reach its target of producing 1 million barrels per day by 2024. Chevron has an advantage: It owns mineral rights on much of its land, so it doesn't pay the 20 to 25 percent production royalties most rivals face.

## USGS ups its estimate of shale oil and gas resources in Appalachia

(LNG Global; Oct. 3) - The Marcellus Shale and Point Pleasant-Utica Shale formations of the Appalachian Basin contain an estimated mean of 214 trillion cubic feet of undiscovered, technically recoverable continuous resources of natural gas, according to new United States Geological Survey assessments. The Marcellus, Point Pleasant and Utica are extensive formations that cover parts of Kentucky, Maryland, New York, Ohio, Pennsylvania, Virginia, and West Virginia.

In 2011, the USGS estimated a mean of 84 trillion cubic feet of gas in the Marcellus Shale, and in 2012 the USGS estimated about 38 trillion cubic feet of gas in the Utica Shale. The Marcellus Shale also contains an estimated 1.5 billion barrels of natural gas liquids, while the Point Pleasant-Utica Shale also contains an estimated 1.8 billion barrels of oil and 985 million barrels of natural gas liquids.

These assessments are for undiscovered, technically recoverable resources. Undiscovered resources are those that have been estimated to exist based on geology and other data but have not yet been proven to exist by drilling or other means. Technically recoverable resources, meanwhile, are those that can be produced using today's standard industry practices and technology. This is different from reserves, which are those quantities of oil and gas that are currently profitable to produce.

# British Columbia split urban/rural over oil and gas development

(Financial Post; Canada; Oct. 2) - A fight over whether or not to launch a class-action lawsuit against oil companies is exposing the urban/rural divide in British Columbia. "We have a healthy, thriving oil and gas industry because you guys are demanding it downstream," Lori Ackerman, mayor of 20,000-resident Fort St. John, B.C., said about the communities in the province's Lower Mainland.

Communities like hers in northeastern B.C. and the natural resources produced there are "out of sight, out of mind" for people in the province's larger population centers such as Vancouver and Victoria, who have "completely forgotten their resource roots," the mayor said, adding that the province still runs on natural resources and exports. The division between municipalities in the interior of the province and on the southern part of the coast came into sharp relief at the Union of B.C. Municipalities meeting last week.

Ackerman put forward a motion calling on the association to "recognize the value of B.C.'s resource sector" even as it moves toward a lower carbon economy. She included a preamble criticizing plans by other municipalities to sue oil companies. The motion passed. The city of Victoria later withdrew its motion calling on the group to "explore the initiation of a class-action lawsuit on behalf of member local governments to recover costs arising from climate change from major fossil fuel corporations." A

similar motion from the City of Port Moody, a bedroom community outside Vancouver, was rejected.

# Public debate over fracking in Australia escalates

(Sydney Morning Herald; Oct. 6) - On an April morning in Darwin, Australia, a group walks toward Parliament House. Alongside them is a mini-bulldozer, a drill bit in front. It's early, and politicians won't arrive for an hour. The group of Aboriginal traditional owners and their supporters erects a mock gas fracking rig on the lawn, topped with a cardboard flame. The drill plunges into the soil creating three or four shallow holes.

The protesters said they wanted to show politicians how it felt to have unwelcome mining machinery come onto their land and start drilling. Their action earlier this year brought their fight against gas fracking in remote areas of the territory to the doorstep of politicians and journalists. Though a majority of people who took part in the Northern Territory government's inquiry into fracking said the industry was not safe, trusted or wanted, two new drilling rigs for exploratory fracking are under construction.

The inquiry found fracking risks could be reduced to acceptable levels — provided 135 recommendations were adopted. While the fight against coal projects has dominated the bandwidth of the climate change debate, the territory's nascent oil and gas fracking industry has largely traveled under the national radar. But this looks to change. The government inquiry estimated greenhouse emissions from any new large shale gas field in the territory would contribute around 6 percent of all Australian emissions.

Fracking has been banned in Victoria and is subject to a moratorium in Tasmania. New South Wales has a restrictive "go slow" approach after community opposition. Last year Western Australia lifted its moratorium on fracking. In Queensland, rapid industry expansion over a decade means there are now around 6,000 gas wells. The Northern Territory imposed a moratorium on the fledgling industry in 2016, pending the inquiry.